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ABSTRACT

Examples of new methods of instruction are given in this monograph, which is the third in a series of five monographs prepared by Harrisburg Area Community College to illustrate how the college is attempting to "meet the changing needs of students." Brief descriptions of several programs and the innovative methods of instruction used in them are given. The programs are A.C. circuits, accounting, data processing, developmental English, educational psychology, marketing, modern culture and the arts, nursing, physics, police science, and shorthand and typing. Tutoring has also been added as a service for students who are having difficulty with certain courses. (BB)

ED038137

MEETING THE CHANGING NEEDS OF STUDENTS: Variations in Methods of Instruction

Monograph No. 3

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PREFACE

The Harrisburg Area Community College will host a case study for the Middle States Association of Colleges and Secondary Schools in April 1970. In preparation, the faculty (through the Research and Development Committee) has elected to prepare five monographs focusing on how a new college has adapted its program to serve its students.

Recognizing that today's young people are different from previous generations, and that the Community College is a new kind of institution, the committee has chosen as a theme "Meeting the Changing Needs of Students." The five monographs are (1) College Governance, (2) Curriculum Development, (3) Variations in Methods of Instruction, (4) A Creative Approach to College Counseling, and (5) A Profile of Students.

No effort has been made to be comprehensive. Materials were selected for their interest or usefulness to others. Little self-evaluation has been written into the papers, but it has been a valuable by-product of their preparation.

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Introduction

Concern has developed among the faculty and administration in the Harrisburg Area Community College about the question of whether education is keeping pace with the ever-increasing changes in a technological society. One area of great importance is the type of instruction offered within the institution. The traditional approach inherited from the public schools and the four-year colleges needs to be supplemented by alternate teaching methods.

If "Educational institutions take shape in response to needs, pressures, and forms in the community which constructs them," (Cohen, 1969) how does a young institution react to the many pressures of a society where education is rated as a must for all? Certainly, if the institution is sensitive to the needs of students, some visible change must take place.

This monograph was prepared by a group of the faculty at the Harrisburg Area Community College to show how some faculty members have reacted to these pressures. The information was gathered through interviews with the faculty, division chairmen, and administrators.

To facilitate the presentation of the data this monograph follows this general outline:

Factors Motivating Change
- *Student Needs*
- *Faculty Concern*
- *Administrative Encouragement*

Illustrations of Variations
- *A. C. Circuits*
- *Accounting*
- *Data Processing*
- *Developmental English*
- *Educational Psychology*
- *Marketing*
- *Modern Culture and the Arts*
- *Nursing*
- *Physics*
- *Police Science*
- *Shorthand and Typewriting*
- *Tutoring*

Reactions

Some of the problems that arose from the changes are explored, and some questions are raised. No effort is made by the committee to evaluate the procedure.

Factors Motivating Change

Student Needs

Most faculty members interviewed indicated that variations in teaching methods were developed in an effort to meet the needs of the students. What are these needs? Who are the people who enroll in the College? What outside forces influence the learning and behavior of the students? The answers to these questions can best be found in a profile of the student population.

Generally, the students range in age from 18 to 21, with a sizeable number from 25 to 35 and up. Economically, half of them come from families with yearly incomes of less than $7,500. The educational background of Harrisburg Area Community College students includes high school curricula ranging from academic to general; many students have been admitted with the high school equivalency diploma. They are probably first-generation college students; consequently, they seldom come with a clear picture of what to expect at college. There are, of course, students who have started college elsewhere, and students with college-educated parents, but they are well in the minority.

Motivations vary. Older students, i.e., aged 25 and up, may have come for economic reasons. They may need a course, or several specific courses, for job upgrading or a promotion, or they may be seeking further training in order to move into another occupation altogether. Younger students too are here for a number of reasons, but the motivational factors are very different. Many are enrolled simply because "it's the thing to do." Young males may be looking for a student deferment from selective service. Some students do come directly from high school with a firm decision on the career they are seeking, but for years statistics have shown that nearly half of those entering college change their majors at least once during the first two years.

Socially, the Harrisburg Area Community College student is not dependent upon the College. Since he is living at home, he still finds much of his social life in his own community. At least two-thirds of the students work part-time, some even full-time, and thus are not free to attend College social functions.

Despite the geographic location of the College, all the students do not have an urban orientation. They come from a three-county area that includes many small towns and rural communities. As a result, it is difficult to challenge their ideas and biases because they return to their communities every night where their prejudices are reinforced. Thus, what the teacher is trying to accomplish in the classroom in the social science courses, for example, is often undermined by the home attitude to which the student has long been exposed and by which he is still influenced.

In trying to meet the needs and satisfy the interests of such students, any program at the College, whether in counseling, student activities, or instruction, must be flexible enough to allow for individual differences. In the admissions philosophy, an attempt is made to capitalize on the strength of a student and compensate for his weaknesses.

While there are explicit requirements for certain curricula, the faculty are willing to work with a student who at the outset is not ready to enter a specified program, but who, through developmental or remedial work, may become eligible for such a curriculum. Each student is started at his own level, but in order to earn a degree he must meet a set of specified institutional requirements. No degree is awarded until those requirements have been satisfied. Designing a program that will better insure each student's success in reaching his degree goal is the aim of the College.

Faculty Concern

Some faculty members are concerned about ways to adapt instructional methods so as to provide an education for all persons to the limit of their capabilities. A student body exhibiting a wide range in age, achievement, ability, motivation, goals, and economic background calls for new approaches. Certainly, the traditional method of instruction for all students has not provided the answer. Some variations in instruction evolved from the need to make more effective use of the professional staff while still providing for individual differences among the students.

Faculty members want to provide instruction that will prevent the "open door" from becoming a "revolving door" that expels students who cannot survive in a traditional classroom. To such teachers, there is a clear mandate to experiment. In addition, the faculty indicate a need to provide course content that is more relevant to the world the students will enter. (Much of the latter is covered in a separate monograph on curricular changes.)

Although there may be some motivation on the part of the faculty to make changes for personal gain or to compete with the faculty of other institutions, these are certainly not primary reasons.

Administrative Encouragement

The students may have needs to be met and the faculty may show concern for meeting these needs; but without administrative encouragement it is not likely that much will be accomplished. Encouragement is evidenced in many ways – the spoken words of the administration, the provision of equipment, and the general climate within the institution.

All of these ingredients can be found here. The President of the College trusts his administrators to make decisions, and his approval is not necessary for every move. The Dean of Administration, Dean of Instruction, and Dean of Students promote a climate that allows faculty members to experiment and even fail without being penalized. The equipment necessary for a special experiment is readily available, and a full-time media specialist is ready to provide technical assistance.

In addition, in-service training programs have been instituted for the entire faculty in order to discuss and demonstrate new techniques of instruction. Although the number of such sessions has been limited, it would appear that some inspiration for change has been generated.

Perhaps even more important is the strong administrative encouragement at the divisional level. The division chairmen are deeply interested in providing relevant instruction for the students and are eager to assist the faculty in many ways. For example, in the Communication and the Arts Division, regular sessions are held to permit the faculty and the division chairman to exchange ideas on methods of instruction. In other divisions, similar meetings are held on an irregular basis.

Illustrations of Variations

New methods of instruction have been initiated for both the traditional transfer courses and courses designed for career students. The scope of change ranges from experiments using new technology for better presentation of a traditional subject, to rather extensive changes in subject matter and approach.

The following illustrations show why a specific practice was undertaken, describe the method of instruction, determine how the information has been shared, and point out some of the problems involved.

A. C. Circuits

An earlier course of career studies in electronic servicing had limited appeal for the students even though community needs were not satisfied. It was thought that a curriculum crossing divisional lines to include business subject matter would provide a greater range of job opportunities. Subsequent contact with prospective employers confirmed this hypothesis.

Consequently, the electronic servicing course was reorganized to include a strong business core and was retitled Electronic Servicing and Merchandising. An analysis of course materials indicated that it was possible to combine a traditionally taught course in A. C. Circuits with an electronic course. The new course could be accomplished in four credit hours by using a programed text to provide the basic instructional information for the electronic portion of the course, supplemented by a five-minute, problem-answering session at the beginning of each regular A. C. Circuits lecture. Every third lab would be devoted to the programed text, stimulated by a ten-minute quiz on prescheduled program materials weekly. The five to ten minutes daily removed from the A. C. lecture encouraged dialogue with the students. Also, the use of every third lab of the A. C. course for this purpose provided a welcome change for the students and encouraged more meaningful experiments and more enthusiastic participation.

The weekly testing stimulus was found to be essential because the program (a linear program on transistors) appeared to move too slowly and resulted in some student lethargy.

No special effort has been made to disseminate to other faculty information on the procedures followed in this class; however, this will be done when the instructor is satisfied with the success of these efforts.

Accounting

New technology, essentially the computer, has led students to believe that accountants are no longer necessary. The need to develop the proper attitude prompted one professor to prepare programs for the

computer to show students that the accountant must first analyze the transactions before the problem can be worked on the computer.

Programs have been written whereby the computer will set up a ledger with opening balances and print out a whole ledger and the trial balance. These programs are used as demonstrations; however, the professor hopes that students will be able to feed transactions into the computer from the accounting classroom when remote-control terminals become operative.

One of the problems in developing this type of instruction is the amount of time necessary to prepare the material. In this instance, the professor was so convinced of the ultimate benefit to the students that he undertook to prepare the material on his own time.

Information on what is being done in this field has been shared with other faculty members within the division, but no effort has been made to inform other schools or professional organizations.

Data Processing

It was believed that students in the survey course in data processing would have a better understanding of systems if they could work with a series of short related problems. Therefore, the professor developed a set of short problems that can be completed in 10 or 15 minutes, starting with a simple skill and building into a whole system. As the student proceeds with the series of small projects, he has a chance to use the machine and, at the same time, to understand the actual use of the machine in business practice.

Although no formal evaluation has been undertaken, students indicate that performing these projects helps them to understand the theory presented in the class.

The materials developed have been used by other members of the division. Some believe they are excellent teaching tools, while others are not so enthusiastic.

Developmental English

One instructor in the developmental English program has made major changes in the method of instruction because he believes that developmental students are different in several ways. Usually they have been failed by the educational system or have failed themselves. Therefore, they are not receptive to the usual college teaching. These

students are more familiar with information media than with great books of the western world.

The assumption is made that writing is in part skill; therefore, the only way to learn to write is by writing. The instructor requires the students to keep a journal. They are encouraged to write about the content of courses they are taking, films they have seen, and experiences that might be relevant to the course. Three separate entries are made per week, and from these the students get experience in translating ideas to the written page. The journal helps them to perceive what they have to contribute to their own education.

The journals are generally not read completely, but they are graded quantitatively and comments are made to give encouragement. Basically, the grade is given for turning in the journal and is based on a pass-fail system.

Some class time is spent in teaching paragraphs and sentences but not formal grammar, since it is felt that time is not spent profitably on that subject. The most important objective in terms of writing is to get a student to the point where he can write solid paragraphs on demand. Class assignments are very flexible and often on an individual basis, with as many personal conferences as possible so that the students may move as fast as their interest and abilities dictate. The major focus is upon communication through writing.

No formal evaluation has been made of this method of instruction, although the instructor talks about his procedures with other teachers. The major limiting factor to this type of approach is the instructor's energy.

Educational Psychology

A new approach to the teaching of educational psychology was prompted by students at a PSEA meeting who told of their desire "to get out and try it," and the professor's belief that a freshman or sophomore should sample the teaching career he may undertake later.

One section of the four educational psychology classes is using a programed text correlated to the text of the three other sections. Assignments of reading, topics for papers and tests will be the same for all four sections. The control section will have one hour of lecture against the regular three-hour lecture sessions of the other sections, thus allowing the two remaining normal class periods for reading, visiting schools, outside speakers, tutoring, and actually working in the public schools.

If the students assigned the programed text can learn as much as the students in the traditional classes and can test out as well, the time spent on the extra activities will be enrichment and the course will still have the necessary content.

If this principle works, classroom situations will be developed through the public schools and the College for a tutoring program. Students will eventually be required to spend a specified amount of time in practical application. The success of this method of instruction will be measurable with a controlled teaching situation where assignments and testing are equal. Projects such as this require more of the professor's time but are rewarding when there is a combination of administrative encouragement and student need. If successful, the method will be suitable for other faculty members and useful to other subject areas and other institutions.

Marketing

Video tape is used in several ways in the marketing class. One way is to record a student's sales presentation in the second half of the semester when he applies the theory learned in the first half.

In the past, discussion of the sales presentation had to take place without any means of review. At times, the student was hesitant to accept criticism because there was no real situation for him to view. The use of the TV tape recorder makes self-evaluation possible.

The second use of television is in role playing. Here, the overall communication is judged, including gestures and the student's injection of his own personality. Both instructor and students agree that this has proven to be quite successful.

The instructor finds that editing is a problem in the use of video tape. Then, too, the need to transport the equipment from one room to another and the amount of time involved is a limiting factor. The suggestion is made that space be provided for a classroom studio within each building to permit the faculty to utilize the equipment more effectively.

Modern Culture and the Arts

This relatively new course has been the focus of major changes in instruction. Several of the instructors were interviewed. One described the course by stating that "the whole learning situation is a dialogue and dialogue is exploration"; while another described it as "a synthesis of all of the arts simultaneously."

In one section there is an attempt to get students to respond to their environment and to talk to each other about it. There are no tests; there are "makings." Some people make films, others sound projects, theater projects, graphic arts, or plastic arts. Resource material is brought into the classroom for the use of the students; however, they are not forced to participate.

In another section, a similar technique is used, to try to bring the whole of traditional material into the current point of view – to start with the present and work toward the past. The course deals with art as processes because, for the most part, the students have a rather unhealthy view of art. Here, students are divided into groups that meet once a week for three hours. The class meeting is used for very theatrical kinds of presentations related to course content.

Mixed media events take place, outside speakers come, and the students create things. An effort is made to show rather than simply to say, although there is a certain amount of discussion. Such a class is probably best described in the following article that appeared in the local *Evening News*:

> Students watch as a pressure machine exerts a force of 12½ tons to crumble a cylinder of concrete, then leave their classroom to inspect a shining classic 1930 Cadillac limousine from Gene Zimmerman's Automobilorama.
>
> A science class? No, it's a special lecture on 'Art and the Machine' given to one of Harrisburg Area Community College's 'Modern Culture and the Arts' classes by . . ., HACC dean of instruction.
>
> The lecture, introduced as 'The Dean and the Machine' by regular teachers . . ., traced the interrelationship of the artist and the engineer through history from the first great painter-scientist, Leonardo Da Vinci.
>
> The central point was that the direct opposition of art and technology is a myth. Many artists have been concerned with machines, and art often enters into engineering design.
>
> Examples continued, from the marvelous machines dreamed up by Renaissance printmaker Albrecht Durer for a triumphal march on paper of Emperor Maximilian, who couldn't afford a real one, to the artistic 1970 Porsche.
>
> Other considerations were the aluminum mannequins at Gimbel's East Mall store, the literary science of Mary Shelley ('Frankenstein') and Jules Verne, and the catalogue bound in stamped tin of the Museum of Modern Art's last show, 'The Machine at the End of the Mechanical Age.'

No formal evaluation of these procedures has been attempted, and until the news story appeared, there had been only informal discussions with members of the division.

A major problem as viewed by the instructors is the attitude of many faculty members who misunderstand and resist what is being attempted in the classroom.

Nursing

Research on associate degree nursing programs indicated that they attracted students with highly diverse backgrounds. To capitalize on this diversity, as well as provide for maximum utilization of the faculty, the program was structured around team teaching and programed instruction.

In addition to class presentations prepared by one or more of the four instructors in their area of specialization, units of three instructional programs are regularly assigned to the forty-eight students. The programed materials cover interpersonal relationships, nutrition, and mathematics. One hour per week is systematically allotted to discussion of the programed material and individual remedial work. The class presentations and programed instructional materials are closely coordinated with the clinical study programs carried out at the several local hospitals. Student evaluation procedures include the total content of the curricular offering.

Class presentations are supplemented by the use of specialized instructional materials. In addition to commercially prepared single-concept films and sound filmstrips in the nursing area, the instructors are exploring the possibilities of becoming involved in the local production of materials of this nature.

The nursing curriculum is still so new that there has not been time for systematic evaluation of the methodology employed. The presence of several instructors in each class, however, provides opportunities for a great deal of informal evaluation by faculty members.

Physics

During the 1967 school year, two professors produced a single-concept film loop and a computer program to supplement a physics experiment performed in their physics classes.

The text of the film loop involves the set-up, running, and evaluation of the experiment. It ends with a scan of the program to be used. The film loop was made so that students would have a reference for their

own use on the experiment. Approximately 30 repetitious evaluations of the raw data from the experiment are necessary for an evaluation of the final results, and each evaluation involves two different calculations. The object of the computer program is to lift this calculating load from the student.

The student's raw data are fed into the computer and a print-out sheet with the student's name, raw data, final results, and experimental error is then produced by the computer. With this as a reference, the student must then evaluate at least three random data points and compare them with the computer results. The student is also required to evaluate his performance of the experiment and deduce why the amount of experimental error was incurred in the results. This error evaluation is an important factor in any experiment. The time saved for the student by the computer can be used to better evaluate the experiment and the student's experimental results.

This past year a new experiment was introduced into the lab which involves more of the same type of repetitious calculations. A second film loop was produced for this experiment, and the computer program was enlarged so that it can be used for both of the physics experiments.

The primary objective was to give the student more time for evaluation of the overall experiment by lessening his load involving repeated calculations. A secondary objective was to acquaint the student with the use of the computer as a research device.

These faculty members presented a paper to the Pennsylvania Association of Physics Teachers in April 1968 on the use of the film loop and program.

Police Science

The Division of Police Science and Public Administration is striving to meet the needs of students through emphasis on practical aspects of related occupations. The concept of involvement has motivated instructors to rely upon simulation and role-playing techniques in many of the curricular programs as well as to introduce a cooperative internship program with the Pennsylvania State Police, local police, and various correctional institutions in the area.

In addition to the theoretical aspects of law enforcement, the course in police operations relies heavily upon application of the knowledge through projects of a simulated nature. Students are required to perform the tactics involved in surveillance of suspects in downtown areas and in surveillance of shoplifting. In conjunction with the

Harrisburg Police Department, they are given the opportunity to establish city patrol beats that must be justified on the basis of demographic information. Additional class projects involve the development of plans for security of visiting dignitaries and plans for road-block operations within the metropolitan area.

Although the techniques employed in police operations have not been subjected to rigorous, controlled evaluation, the faculty feels that the activities have been effective. This opinion has been reinforced by subjective student evaluation. *Distribution and Deployment of Patrol Force,* a document describing the establishment of city patrol beats in Harrisburg, was a result of one of the class projects. This report clearly indicates a great deal of student involvement in the simulated experience.

Shorthand and Typewriting

Students entering the secretarial curriculum in a community college bring with them varied academic backgrounds. Some students will not have finished any courses in either shorthand or typewriting, while others will have completed from one to six semesters of stenographic skills and related subjects. In any class, all students rarely advance at the same rate.

Although advanced placement in the skill subjects is used by many colleges to help overcome some of the problems, the main question facing the faculty at Harrisburg Area Community College was to find some way to provide for these individual differences. The traditional method of instruction did not seem to allow for such differences.

The faculty was also concerned about the effectiveness of the traditional method of instruction in the utilization of the professional staff. Should professional personnel spend their time standing in front of the class, stopwatch in hand, dictating to, at best, a small portion of the class at any given time? Was any real assistance being given to individual students under these conditions? Could new technology be used to better accomplish the objectives of the curriculum? Could faculty time be spent more productively in preparing class materials?

A further concern of the faculty was the ever-increasing cost of instruction in the secretarial program because of the large number of laboratory hours. A review of the literature indicated that some schools were experimenting with audio instruction in the teaching of shorthand and typewriting, and there was brief mention at conferences of the use of programed texts in shorthand.

A proposal was written for a two-year pilot study to determine whether it is desirable to have a master teacher conduct more than one class in shorthand and typewriting at the same time by using instructional assistants, audio tapes, transparencies, and tachistoscope slides. The proposal was approved and the study was started in the fall of 1966 with the entering secretarial and office studies students.

Control and experimental groups were set up and were matched on the basis of ACT test scores. All material used in the experimental and control classes was prepared at least one semester in advance, tested and revised where necessary. The control group used the programed approach with a professional conducting the class, while the experimental group used exactly the same method with a paraprofessional, or as she is called, an instructional assistant, conducting the class.

Facilities. Each of two classrooms is equipped with a four-channel audio system with a console, instructor's monitor, and individual listening stations at each student desk. The listening stations permit each student to select the proper channel and to control the volume. Each classroom is also equipped with a tachistoscope, overhead projector, screen, and microfilm cabinet for storage of homework tapes.

The Staff. All classes in shorthand and typewriting are taught by one full-time member of the professional staff and three instructional assistants. The instructional assistants have associate degrees with majors in secretarial science and have gained experience in business offices prior to joining the College staff. The instructional assistants dictate shorthand tapes following the lesson plan prepared by the professional staff, keep records of student achievement, proofread and check papers in preparation for grading by the professional staff, and conduct the skills classes. Their role in the classroom is to monitor activities as they move about observing techniques and assisting students in the learning process.

The professional staff is responsible for developing new materials for the classes, supervising the work of the instructional assistants and the students, assisting individual students, and evaluating student performance.

Teaching Activities. A detailed lesson plan was prepared for each day's class, setting forth the objectives for the class, the order of teaching activities, the specific steps to be presented, and the amount of time to be devoted to each activity. Each class period was varied so as

to prevent boredom. The tapes were then prepared from these plans, with four tapes available at different speeds for each class period, thereby permitting each student to progress at his or her own rate of speed.

All four semesters of shorthand are taught with audio tape, tachistoscope slides, and transparencies. Each lesson plan is filed in a folder in the office, and every afternoon the instructional assistant removes the next day's plan. The first page indicates the materials that will be needed for the class. All these materials are placed in a portfolio, and the next day the instructional assistant needs only to pick up the portfolio, go to class, prepare the equipment for operation, and turn on the machines.

Four tapes, each at a different speed, are available for out-of-class work by the students. These are housed in microfilm cabinets in the two classrooms and the students are required to use them at their convenience. It is not necessary to have a lab assistant since the equipment can be operated by the students.

Programed Approach to Typewriting. This proved to be the most difficult area to program because many more illustrations are required, and a meticulously prepared script is necessary to insure that all instructions are clear and accurate and that the point at which the illustrations are to be shown is clearly indicated. The illustrations consist of both commercial and locally produced transparencies. The audio tapes were dictated by the professional staff, with each tape containing a full class period. Silent time is allotted on the tape to permit the students to perform tasks immediately following the instructions. No "live" teacher instructions are given in the classes; however, constant supervision and assistance are provided by the instructional assistants.

By giving a diagnostic or placement test at the beginning of the course, an attempt is made to allow each student to start at his or her own level. Some students start at the very beginning, others with the numeric keyboard, and still others with the second semester of typewriting. Even with this program, it is found that some students are rather far advanced. As soon as this is determined, they are given some additional experiences through instruction on the magnetic tape selectric typewriter (MT/ST). They learn to program material on this typewriter and where possible are given real projects, so that they may become as proficient as possible in the operation of the machine.

Student Performance. The data collected in the study indicated that there is no significant difference between the performance of students in shorthand and typewriting taught with taped instruction and dictation by a professional teacher, and those taught in the same manner but by instructional assistants. Therefore, since salaries of paraprofessionals are lower than those for professionals, the method of instruction developed in the study is still in operation.

Student Attitude. Throughout the pilot program, the professional staff was concerned with the attitude of the students toward this method of instruction. Survey forms completed by the students indicated that over 90 percent favored this method for these reasons:

1. Enabled everyone to work at his own speed without holding the rest of the class to a certain rate of speed.
2. Every explanation is planned. There is no time when your mind can wander because of pauses in the explanation.
3. You could practice any time you wanted to.
4. It helps you think for yourself and it is a pleasant change from high school.
5. Instructional assistants can help each individual more thoroughly.

There was no significant difference in the students' evaluation of the all-round teaching ability of the faculty member when the traditional and programed approaches were used.

Advantages of the Programed Approach. The faculty are enthusiastic about the program because this is a flexible approach to instruction. In addition to freeing faculty members for the preparation of materials to be used in the classes, it allows them to establish closer contact with more students on an individual basis than was formerly possible. It also facilitates the scheduling of small sections that would normally be exorbitant in cost, since as many as four classes may be in session at one time. Two and even three small sections may be in operation in one classroom, i.e., a filing and machines class along with two small sections of advanced typewriting.

It is also possible to give a student a special class time when necessary if she has to go to work at the regular typewriting hour.

If a student is absent for a long time because of illness, a machine and copies of the tapes can be sent to her home so that she can keep up with her skills classes.

Although the programed approach to the teaching of shorthand and typewriting has been successful in providing for individual differences, in utilizing professional time more effectively, and in reducing costs, it

has not become static. Revisions are constantly being made, and as new technology is developed, more and more changes will probably take place.

As a direct outgrowth, a model office was set up in one of the classrooms. It is equipped with 10 secretarial work stations, two magnetic tape selectric typewriters, a composer system, and two PBX central recording units. Here students are given the opportunity to put classroom theory into practice and to gain experience in making decisions.

Students work in this office during their second year of shorthand and typewriting for one half of each semester. Each girl is rotated into the job of office manager. She assigns work to each girl and checks it for accuracy before forwarding it to the dictator. In addition to transcribing dictation from the central recorders, the girls are sometimes asked to make reservations and plan itineraries for traveling professors, duplicate materials for the professional staff, answer the telephone, take messages, screen visitors, and set up appointments. Carbon copies are made of all material typed, and students are required to maintain their own filing system. They may type manuscripts, send out mailings or handle any other details that would normally be performed in an office. Each girl is also required to keep a current desk manual and tickler file so that she can review the procedure for each task just as she would in a business office.

Dissemination. The staff has "told the story" of the programed approach to the teaching of shorthand and typewriting at conferences held by the Eastern Business Teachers Association, the American Association of Junior Colleges, the Pennsylvania Business Education Association, and at a faculty meeting at the College.

Faculty and administration from many community colleges have observed the instruction here, including Northampton County Community College, Lehigh Valley Community College, Williamsport Community College, Philadelphia Community College, Miami-Dade Community College, Hagerstown Community College, Corning Community College, and Mt. Royal College, Calgary, Alberta.

The lesson plans and scripts for the shorthand tapes are being exchanged with Miami-Dade Community College at present.

Problems. One of the major problems encountered in the development of the program was the lack of guidelines on the procedure of preparing visual and audio material. A great deal of energy and time was wasted through trial and error. In addition, constant evaluation of such a program by students and instructors is necessary.

Another problem area is dissemination of information on this method of instruction. Working with others who express interest in the program requires many hours.

There is always the problem of defining faculty load under such a system. It would be highly impractical to use the traditional credit hour gauge for this method.

The programed approach would appear to be a perfect system for involving team teaching, but this was tried and found to be highly unsatisfactory. Different faculty members have different needs to fulfill, and it is difficult to find a number who are willing to accept a new definition of teaching that does not involve the lecture discussion approach.

Further, there is the unanswered question of what part of such a program a faculty member might be able to take with him if he moved to another teaching situation. What percentage of the materials in such a project are developed on school time and how much on the individual's own time?

Tutoring

A survey indicated that large numbers of students were having difficulty in mathematics, English, psychology, and accounting. It was proposed that another student might be able to relate to a student when classroom instruction had failed. It was further pointed out that a student working for the benefit of the College and fellow students should be paid, and that this was a legitimate use of work-study funds.

It was felt that tutorial service should begin no later than the third week of the semester; and that after six or seven class meetings, the instructor and the student should be able to determine whether there was a need for tutoring. The subject matter specialist is relied upon to identify advanced students who can serve as tutors. The division counselor then brings together the student who needs help and the student who can meet that need. An attempt is made to report back to the instructor who made the referral on just how much tutorial service has been provided.

Information on the tutorial service has been disseminated outside the institution by students who represent the College at the local high schools. The students are encouraged to inform prospective students that tutoring service is available. In addition, counselors, admissions staff, and the faculty advise students to take advantage of tutorial service before real academic difficulty is encountered.

The tutoring service is not without problems. There is still the unanswered question of how to promote the whole idea of tutorial service to the faculty.

The mechanical process of setting up the first two weeks of every semester is also a problem area. In addition, some students will take the student tutor's time without producing any results. The tutor is in a poorer position to handle such a person than is a professional teacher. Perhaps more support should be provided for the student tutors. However, these problems do not outweigh the advantages of the program.

Reactions

No attempt has been made to evaluate the individual procedures described; and to say that change is the rule rather than the exception at the College would not be accurate. Some efforts have been made to try to meet the students' needs, and some changes have led to additional thinking. Many of the faculty are presently discussing plans for future changes in methods of instruction. However, it might be resonable to ask whether the changes that have taken place will remain. Are they simply a passing whim, or is this a natural growth process to more meaningful instruction?

At this institution, the administrative climate and the commitment of the faculty to the community college movement hold promise for continued re-evaluation of teaching methodology. The "open door" policy lends itself to change; the basis for innovation has been laid.

In gathering the information for this document, it became evident that a more structured approach is needed for exchanging ideas on instruction within the institution. There needs to be more discussion between divisions in undertaking to improve methods of instruction. In order to progress further in these new teaching procedures, the faculty must be able to systematically question the value of a procedure without threatening those directly involved.

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